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☐ 1: [Biotechnology \(N Y\)](#). 1992 Nov;10(11):1455-60.

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"Primatization" of recombinant antibodies for immunotherapy of human diseases: a macaque/human chimeric antibody against human CD4.

Newman R, Alberts J, Anderson D, Carner K, Heard C, Norton F, Raab R, Reff M, Shuey S, Hanna N.

IDEC Pharmaceuticals Corporation, La Jolla, CA 92037.

Immunoglobulin variable region genes from non-human primates, cynomolgus macaques, were shown to have 85%-98% homology with human immunoglobulin sequences and yet macaques are phylogenetically distant enough to respond against conserved human antigens. Immunoglobulin genes were isolated from monkeys immunized with human CD4 antigen and a human/monkey chimeric anti-CD4 antibody with 91-92% homology to human immunoglobulin framework regions was cloned and expressed. The antibody has an apparent affinity of 3.2×10^{-11} M and exhibits potent immunosuppressive properties in vitro.

PMID: 1369023 [PubMed - indexed for MEDLINE]

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Humoral response of cynomolgus macaques to human soluble CD4: antibody reactivity restricted to xeno-human determinants. [J Clin Immunol. 1990](#)

A humanized form of a CD4-specific monoclonal antibody exhibits decreased antigenicity and prolonged plasma half-life in rhesus monkeys while retaining its unique biological and antiviral properties. [J Biol Chem. 1997](#)

Cloning and sequence analysis of kappa and gamma cynomolgus monkey immunoglobulin genes. [J Biol Chem. 1993](#)

Epitope analysis and primary structures of variable regions of anti-human Fc epsilon RI monoclonal antibodies, and expression of the chimeric antibodies fused with human constant regions. [Biochem Biophys Res Commun. 2000](#)

Characteristics of murine monoclonal anti-CD4. Epitope recognition, idiotype expression, and variable region gene sequencing. [J Immunol. 1992](#)

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